



NORLITE, LLC

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August 26, 2013

Ms. Nancy Baker
Deputy Regional Permit Administrator
New York State Department of Environmental Conservation
Region 4
1130 North Westcott Road
Schenectady, NY 12306-2014

RETURN RECEIPT REQUESTED VIA EMAIL

Mr. Kenneth Eng
Air Compliance Branch
United States Environmental Protection Agency
Region 2
290 Broadway
New York, NY 10007-1866

RETURN RECEIPT REQUESTED VIA EMAIL

Re: Norlite Corporation-MACT Excessive Exceedances Report
Kiln 1: 07/11/13 – 08/21/13
Kiln 2: 07/11/13 – 08/21/13

Dear Sir/Madam:

In accordance with 40 CFR 63.1206(c)(3)(vi), the Norlite, LLC (Norlite) is submitting an "Excessive Exceedance Report" for the timeframe of 07/11/13 thru 08/21/13. The attached document explains each of the "malfunctions" for Kilns One and Two.

The results of the investigation concluded a majority of the waste feed cutoffs were a result of the span limit associated with the stack gas flow monitor. The majority of the cutoffs were caused by water droplets hitting the stack gas probe and causing artificially high flow rate readings. A review of the data indicates there were no specific operations or adjustments occurring which would have contributed to water droplets contacting the stack gas probe. In order to reduce the possibility of water droplet movement after the Mist Pad, the I.D. Fan was reduced slightly to slow the flow rate down slightly. The Mist Pads were inspected during the last kiln shutdowns in July and August and found to be in good condition. It is believed that water is accumulating, from pluggage, on the Mist Pad and causing a source for the water droplets. Norlite has requested an engineer from the baghouse bag manufacturer inspect the entire APC system to determine why the bags have been prematurely failing and causing baghouse dust to enter the scrubber system where it is causing systems to become plugged. The requested inspection occurred on Kiln 1 during the shutdown which occurred on August 21, 2013.

To help resolve stack gas span cutoffs in general, Norlite has been working with the Department to install a new optical flow technology to monitor stack gas flow rate. A test unit has been installed on Kiln 1 and RATA tested to obtain additional information to be used in future calculations. Norlite is working to have the unit in Kiln 1 completely certified and approved for operation by Mid-August of 2013. Before the unit can be certified and officially used at the kiln, Norlite and the Department must first decide what moisture constant will be used in the flow rate calculation. Norlite has presented data which was collected when the optical flow sensor had RATA testing done on it. This data is being compared with RATA data collected at the same time on the current stack gas flow measuring technology. After final approval is given for the



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unit on Kiln 1, Norlite will install a unit on Kiln 2 with an expedited schedule for completion which will hopefully see the unit in certified operation by October 2013.

Norlite has been working with the Department to improve LGF delivery and handling at the kilns to address these types of cutoffs. The Department has conditionally approved Norlite's plan to remove the minimum LLGF Line Pressure requirement, allow a positive displacement pump to be used for fuel flow control, and allow the use of a recirculation line for use during times when off LGF. The Department has requested a six month study be conducted without a minimum LLGF Line Pressure requirement. The study has been underway since May 01, 2103 and will be completed on October 31, 2013. Norlite is continuing to search for a positive displacement pump which will allow variable speed control, have tight pump tolerance, and have suitable reliability for long term use. Norlite will have a pump in place sooner but no later than December of 2013. Norlite will submit a final report to the Department in December 2013 detailing the findings from the study without a minimum LLGF Line Pressure. Norlite is hopeful to have final approval from the Department early 2014 for the positive displacement pump which is installed and for the final removal of the LLGF Line Pressure requirement. To further help develop a suitable fuel delivery system at the kilns, Norlite has enlisted the help of SPEC Engineering which specializes in process engineering and development. With addition of SPEC Engineering and the combustion expertise from Arcadis, Norlite is very hopeful to have a fully functional fuel delivery system at the kilns which will help reach a steady state operation.

All of the malfunctions that occurred were consistent with our Startup, Shutdown and Malfunction Plan (SSMP). As approved by the NYSDEC on February 6, 2006, these reports are being sent electronically.

Should you have any questions regarding this letter, please contact me at (518) 235-0401 or email at: tom.vanvranken@tradebe.com.

Sincerely,

Thomas Van Vranken

Thomas Van Vranken
Environmental Manager

Attachments

ecc: Don Spencer, NYDEC – R4 w/attachments
James Lansing, NYSDEC – CO w/attachments
Joseph Hadersbeck, NYSDEC – R4w/attachments
Jim Quinn, NYSDEC – R4 w/attachments
Tita LaGrimas – Tradebe



NORLITE, LLC
MACT EXCEEDANCE REPORT - KILN 1
07/11/13 - 08/21/13

Start Date	Start Time	End Date	End Time	Downtime	#	Event	Cause	Parameter	Limit	Corrective Action
7/11/2013	3:32:42	7/11/2013	3:52:52	0:20:10	132	Malfunction	Kiln 2 Was Down For Maintenance Which Stressed the Kiln 1 Primary Air Fan and Caused It to Trip Out, Resulting in a Loss of Rear Chamber Pressure	Back Chamber Pressure, HRA	Opl	I & E Reset the Breaker For the Primary Air Fan and Restarted the Fan
7/12/2013	1:12:19	7/12/2013	1:12:48	0:00:29	133	Malfunction	The End of the Burn Tank Was Reached Which Caused the Flame to Pulse and the Frontend Differential Kiln Pressure to Decrease	Front Kiln Pressure, 1 Second Delay	Opl	A New Burn Tank Was Started and the Pump Stabilized
7/12/2013	1:12:52	7/12/2013	1:13:32	0:00:40	134	Malfunction	The End of the Burn Tank Was Reached Which Caused the Flame to Pulse and the Frontend Differential Kiln Pressure to Decrease	Front Kiln Pressure, 1 Second Delay	Opl	A New Burn Tank Was Started and the Pump Stabilized
7/12/2013	3:27:16	7/12/2013	3:27:42	0:00:26	135	Malfunction	The LGF Pump Kept Losing Pressure Which Caused Sudden Flow Rate Changes Which Affected the Frontend Differential Pressure As the Flame Pulsed	Front Kiln Pressure, 1 Second Delay	Opl	Attempts Were Made To Adjust the Pump But Ultimately the Kiln Was Switched to Another Tank
7/12/2013	10:10:31	7/12/2013	10:12:55	0:02:24	136	Malfunction	Water Droplets From the Mist Pad Contacted the Stack Gas Probe Which Caused It to Fault and Provide High Flow Rate Readings	Stack Gas Flow Rate	Span	The ID Fan Speed Was Reduced and the Mist Pad Rinse Water Checked to Ensure It Was Off
7/22/2013	6:57:03	7/22/2013	7:05:48	0:08:45	137	Malfunction	The LGF Pump Was Experiencing Reduced Pressure Which Caused the Pump To Have Sudden Flow Rate Change, Resulting In the Instantaneous Upper Instrument Level Being Reached For LGF Flow Rate Span	LGF Flow	Span	The LGF Pump Pressure Was Adjusted By a Fuel Farm Tech to Stabilize the Pump Pressure and Flow Rate
7/22/2013	7:05:52	7/22/2013	7:06:37	0:00:45	138	Malfunction	The LGF Pump Was Experiencing Reduced Pressure Which Caused the Pump To Have Sudden Flow Rate Change, Resulting In the Instantaneous Upper Instrument Level Being Reached For LGF Flow Rate Span	LGF Flow	Span	The LGF Pump Pressure Was Adjusted By a Fuel Farm Tech to Stabilize the Pump Pressure and Flow Rate
7/22/2013	16:02:41	7/22/2013	16:03:05	0:00:24	139	Malfunction	After An Inspection By I&E, It Was Determined the Probe Was Dirty Which Caused the Upper Instantaneous Instrument Setpoint To Be Reached	Stack Gas Flow Rate	Span	Adjusted Fuel Flow
7/23/2013	3:34:50	7/23/2013	3:40:06	0:05:16	140	Malfunction	Instantaneous Upper Instrument Setpoint Reached for LGF Flow Span Due To Controlling Flow Rate With Valves, Allowing Sudden Rate Changes To Occur	LGF Flow	Span	Adjusted Fuel Flow
7/28/2013	0:42:31	7/28/2013	0:43:23	0:00:52	141	Malfunction	The pH Sample Loop Was Partially Plugged With Soda Ash and Baghouse Solids	Scrubber pH	Span	The Sample Loop Was Cleaned
8/1/2013	7:17:17	8/1/2013	7:17:43	0:00:26	142	Malfunction	During the Overnight Shift, the Kiln 1 Recirculation Line Was Partially Closed Causing High LGF Line Pressures That Made LGF Valve Control Difficult. The Recirculation Line Was to Remain Entirely Open During the LGF Line Pressure Study Starting 5/1/13.	Front Kiln Pressure, 1 Second Delay	Opl	The Operators Have Been Instructed to Keep the Recirculation Line Open or Face Potential Disciplinary Action



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MACT EXCEEDANCE REPORT - KILN 1
07/11/13 - 08/21/13

Start Date	Start Time	End Date	End Time	Downtime	#	Event	Cause	Parameter	Limit	Corrective Action
8/3/2013	7:37:52	8/3/2013	8:53:06	1:15:14	143	Malfunction	A Coating On the Stack Gas Probe Caused Erroneous High Stack Gas Flow Readings	Stack Gas Flow Rate	Span	I & E Removed the Coating and Inspected the Probe For Damage
8/4/2013	4:31:52	8/4/2013	5:28:13	0:56:21	144	Malfunction	A Coating On the Stack Gas Probe Caused Erroneous High Stack Gas Flow Readings	Stack Gas Flow Rate	Span	I & E Removed the Coating and Inspected the Probe For Damage
8/5/2013	12:49:38	8/5/2013	12:51:17	0:01:39	145	Malfunction	A High Instantaneous Stack Gas Reading Was Caused By Water Droplets Hitting the Probe	Stack Gas Flow Rate	Span	Baghouse and Scrubber Maintenance Occurred Starting 8/5/13
8/8/2013	22:36:00	8/8/2013	22:36:54	0:00:54	146	Malfunction	The Same pH Probe Which Caused the Previous Cutoff Was Involved This Time and the Probe Was Deemed Faulty	Scrubber pH	Span	I & E Replaced the pH Probe and Calibrated the Unit
8/12/2013	14:32:50	8/12/2013	15:34:03	1:01:13	147	Malfunction	A Fuel Surge Occurred, Causing the CO's to Spike	Carbon Monoxide	Opl	Adjusted Fuel Flow
8/13/2013	21:30:45	8/13/2013	22:00:40	0:29:55	148	Malfunction	A Coating On the Stack Gas Probe Caused Erroneous High Stack Gas Flow Readings	Stack Gas Flow Rate	Span	I & E Removed the Coating and Inspected the Probe For Damage
8/16/2013	1:11:11	8/16/2013	1:15:27	0:04:16	149	Malfunction	A High Instantaneous Stack Gas Reading Was Caused By Water Droplets Hitting the Probe	Stack Gas Flow Rate	Span	Baghouse and Scrubber Maintenance Occurred Starting 8/21/13
8/16/2013	2:18:43	8/16/2013	2:19:26	0:00:43	150	Malfunction	The Operators Were Controlling Fuel Flow Using Valve Which Caused a Fuel Surge to Occur, Affecting the Frontend Differential Kiln Pressure	Front Kiln Pressure, 1 Second Delay	Opl	Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements



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MACT EXCEEDANCE REPORT - KILN 2
07/11/13 - 08/21/13

Start Date	Start Time	End Date	End Time	Downtime	#	Event	Cause	Parameter	Limit	Corrective Action
7/22/2013	6:57:07	7/22/2013	7:05:49	0:08:42	90	Malfunction	The Operators Were Controlling Fuel Flow Using Valves Which Caused a Fuel Surge To Occur, Triggering the Upper Instantaneous Instrument Setpoint To Be Reached	LGF Flow	Span	Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements
7/23/2013	17:29:45	7/23/2013	17:30:37	0:00:52	91	Malfunction	Built Up Soda Ash Solids Plugged the Line Until Water Pressure Broke the Solids Free, Causing a Sudden Flow of Water that Triggered the Upper Instantaneous Instrument Setpoint To Be Reached	Scrubber Recirc. Rate	Span	On 7/26/13, Kiln Maintenance Occurred Which Included Cleaning the Scrubber System
7/24/2013	7:17:54	7/24/2013	8:57:51	1:39:57	92	Malfunction	The Scrubber Recirculation Flow Meter Became Coated In Soda Ash Solids, Causing the Meter to Fault and Supply a High Flow Rate	Scrubber Recirc. Rate	Span	I & E Cleaned the Flow Meter and Recalibrated the Unit
7/28/2013	1:21:42	7/28/2013	1:22:12	0:00:30	93	Malfunction	The Operators Were Controlling Fuel Flow Using Valves Which Caused a Fuel Surge To Occur, Affecting the Rear Chamber Differential Pressure	Back Chamber Pressure, 1 Second Delay	Opl	Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements
7/28/2013	18:22:04	7/28/2013	18:23:44	0:01:40	94	Malfunction	While Controlling Fuel Flow With Valves, A Surge Occurred Which Caused the Instantaneous Upper Instrument Setpoint To Be Reached For LGF Flow	LGF Flow	Span	Adjusted Fuel Flow
7/29/2013	3:36:38	7/29/2013	3:37:53	0:01:15	95	Malfunction	While Controlling Fuel Flow With Valves, A Surge Occurred Which Caused the Instantaneous Upper Instrument Setpoint To Be Reached For LGF Flow	LGF Flow	Span	Adjusted Fuel Flow
7/29/2013	6:55:22	7/29/2013	7:51:03	0:55:41	96	Malfunction	A Coating On the Stack Gas Probe Caused Erroneous High Stack Gas Flow Readings	Stack Gas Flow Rate	Span	I & E Removed the Coating and Inspected the Probe For Damage
7/31/2013	12:28:44	7/31/2013	12:32:52	0:04:08	97	Malfunction	Water Droplets From the Mist Pad Contacted the Stack Gas Probe Which Caused the Instantaneous Upper Instrument Setpoint to be Reached for Stack Gas Span	Stack Gas Flow Rate	Span	The ID Fan Was Reduced Slightly to Help Prevent Water Droplet Movement Up the Stack
7/31/2013	17:52:54	7/31/2013	17:55:07	0:02:13	98	Malfunction	Water Droplets From the Mist Pad Contacted the Stack Gas Probe Which Caused the Instantaneous Upper Instrument Setpoint to be Reached for Stack Gas Span	Stack Gas Flow Rate	Span	The ID Fan Was Reduced Slightly to Help Prevent Water Droplet Movement Up the Stack
8/4/2013	12:03:44	8/4/2013	12:14:13	0:10:29	99	Malfunction	The Data Suggests This is Not a True Flow Rate Span but Rather a Malfunction of the Flow Meter Caused By High Suspended Solids From the Baghouse	Scrubber Blowdown Rate		An Engineer From the Baghouse Bag Supplier is Inspecting the Entire APC System to Determine the Cause for the Bag Failure Which Has Been Occurring



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MACT EXCEEDANCE REPORT - KILN 2
07/11/13 - 08/21/13

Start Date	Start Time	End Date	End Time	Downtime	#	Event	Cause	Parameter	Limit	Corrective Action
8/13/2013	13:26:52	8/13/2013	13:40:32	0:13:40	100	Malfunction	A Fuel Flow Surge Occurred While Controlling Flow Rate with Valves, Causing the Instantaneous Upper Instrument Setpoint to be Reached for LGF Flow Rate Span	LGF Flow	Span	A Process Engineering Group Has Been Asked to Evaluate the Fuel Delivery System at the Kilns to Improve Overall Operations
8/13/2013	19:29:59	8/13/2013	20:31:31	1:01:32	101	Malfunction	Water Droplets From the Mist Pad Contacted the Stack Gas Probe Which Caused the Instantaneous Upper Instrument Setpoint to be Reached for Stack Gas Span	Stack Gas Flow Rate	Span	The ID Fan Was Reduced Slightly to Help Prevent Water Droplet Movement Up the Stack
8/16/2013	7:13:37	8/16/2013	7:15:38	0:02:01	102	Malfunction	A Fuel Flow Surge Occurred While Controlling Flow Rate with Valves Which Caused the Instantaneous Upper Instrument Setpoint to be Reached for LGF Flow Rate Span	LGF Flow	Span	A Process Engineering Group Has Been Asked to Evaluate the Fuel Delivery System at the Kilns to Improve Overall Operations
8/17/2013	2:48:23	8/17/2013	2:48:44	0:00:21	103	Malfunction	A Fuel Flow Surge Occurred While Controlling Flow Rate with Valves Which Caused the Instantaneous Upper Instrument Setpoint to be Reached for LGF Flow Rate Span	LGF Flow	Span	A Process Engineering Group Has Been Asked to Evaluate the Fuel Delivery System at the Kilns to Improve Overall Operations
8/17/2013	2:50:48	8/17/2013	3:51:46	1:00:58	104	Malfunction	The Fuel Surge Which Occurred From Controlling Flow Rate With Valves Caused a CO Spike to Occur	Carbon Monoxide	Opl	A Process Engineering Group Has Been Asked to Evaluate the Fuel Delivery System at the Kilns to Improve Overall Operations
8/17/2013	8:10:47	8/17/2013	9:05:41	0:54:54	105	Malfunction	Water Droplets From the Mist Pad Contacted the Stack Gas Probe Which Caused the Instantaneous Upper Instrument Setpoint to be Reached for Stack Gas Span	Stack Gas Flow Rate	Span	The ID Fan Was Reduced Slightly to Help Prevent Water Droplet Movement Up the Stack
8/18/2013	8:07:00	8/18/2013	9:43:44	1:36:44	106	Malfunction	The Data Suggests This Is Not a True Flow Rate Span, But Rather a Malfunction of the Flow Meter Caused By High Suspended Solids From the Baghouse	Scrubber Blowdown Rate	Span	An Engineer From the Baghouse Bag Supplier Is Inspecting the Entire APC System to Determine the Cause for the Recurring Bag Failure